BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

DOCKET NO. 2020-229-E

In the Matter of: Dominion Energy South Carolina, Incorporated's Establishment of a Solar Choice Metering Tariff Pursuant to S.C. Code Ann. Section 58-40-20 (See Docket No. 2019-182-E)	**JOINT POST HEARING BRIEF OF SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, SOUTHERN ALLIANCE FOR CLEAN ENERGY, UPSTATE FOREVER, VOTE SOLAR, NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION, AND SOLAR ENERGY INDUSTRIES ASSOCIATION**

I. INTRODUCTION

This proceeding arises out of the requirement of the South Carolina Energy Freedom Act of 2019 ("Act 62" or the "Energy Freedom Act") that the Public Service Commission ("Commission") establish a "solar choice metering tariff" that will apply to Dominion Energy South Carolina, Inc. ("DESC") customers who apply for net metering on or after June 1, 2021. S.C. Code Ann. § 58-40-20 (F)(1). In enacting Act 62's new requirements for net metering, the General Assembly expressly stated its intent (1) to build upon the successful deployment of solar generating capacity through Act 236 of 2014 to continue enabling market driven, private investment in distributed energy resources ("DERs") by reducing regulatory and administrative burdens to customers installing and using onsite DERs; (2) to avoid disrupting the growing state market for customer-scale DERs; and (3) to require the Commission to establish solar choice metering requirements that fairly allocate costs and benefits to eliminate any cost shift associated with net metering to the greatest extent practicable. S.C. Code Ann. § 58-40-20 (A).

The parties to this proceeding have presented the Commission with three solar choice tariff proposals or recommendations: DESC's Solar Choice Proposal, the Office of Regulatory Staff's ("ORS") Proposed Modifications to that proposal ("ORS Proposed Modifications"), and the Joint Intervenors' Proposed Tariff ("Joint Solar Choice Proposal"), presented jointly by the South Carolina Coastal Conservation League ("CCL"), Southern Alliance for Clean Energy ("SACE"), Upstate Forever, Vote Solar, the North Carolina Sustainable Energy Association ("NCSEA"), and the Solar Energy Industries Association ("SEIA") (collectively, "Joint Intervenors"). As this brief will demonstrate, both the DESC Solar Choice Proposal and ORS's Proposed Modifications violate multiple provisions of Act 62, ignore the above expressions of legislative intent, and therefore must be rejected by the Commission.

DESC's Solar Choice Proposal would dramatically decrease potential bill savings for all but the largest residential customers who install smaller than average rooftop solar systems, severely disrupting the state's growing market for rooftop solar. Two key features of the Company's proposal are a per-kW Subscription Fee and an inflated Basic Facilities Charge ("BFC") that, in combination, would create $62.70 per month in unavoidable fees for an 8 kW system, penalizing behind the meter usage and sharply cutting into customer bill savings opportunities. At the same time, the low volumetric rates in the DESC proposal would discourage customer adoption of efficiency measures and encourage the wasteful use of energy, even during times of system peak, which could put upward pressure on utility costs for all customers. DESC is also proposing a switch from annual netting under current NEM programs to fifteen-minute netting, even though DESC has not fully deployed Advanced Metering Infrastructure ("AMI") that would enable DESC or its customers to understand the implications of this drastic change on how excess solar production is credited on customer bills. Though DESC claims that its Solar Choice Proposal is necessary to reduce a "cost shift" to non-solar customers, DESC has not proven that any such cost shift exists, and its Solar Choice Proposal would not provide any immediate or measurable benefits to non-solar customers. Contrary to Act 62, DESC did not conduct a cost of service analysis to determine how solar customers affect its costs. Rather, DESC designed a solar choice tariff to protect only the utility from the prospect of lost revenues by dramatically reducing bill saving opportunities for those customers who adopt solar. In sum, the DESC Solar Choice Proposal is a dramatic change to the status quo that would severely disrupt the solar industry in South Carolina and impair customer access to solar in violation of Act 62.

ORS's Proposed Modifications would even further reduce bill savings for customer-generators, and must likewise be rejected. ORS was explicit that its Proposed Modifications had only one purpose—eliminating cost shift—and thus its proposal ignores multiple directives that the Commission must weigh before establishing a solar choice tariff. But ORS's Proposed Modifications are not just incomplete; they are based on an incorrect understanding and calculation of potential cost shifts. ORS relied on the faulty assumption that solar customer bill savings result in a near dollar-for-dollar cost shift to non-solar customers. ORS's expert witness also relied on cost of service assumptions that conflict with DESC's own embedded cost of service study, and which resulted in ORS significantly undervaluing the benefits of distributed rooftop solar generation for all of the utility's customers. Ultimately, as ORS's expert witness Brian Horii acknowledged, if he were required to consider all of Act 62's mandates, as the Commission is required to do, he would not recommend that the Commission adopt ORS's proposal.

In contrast, the Joint Solar Choice Proposal satisfies all of the provisions of Act 62. It represents a gradual change from the status quo of retail rate net metering, would result in a modest decline in bill savings for customer-generators, and would preserve the viability of the residential solar market in DESC's territory. The Joint Solar Choice proposal is based on a full consideration of the long-run benefits and costs of rooftop solar from the perspective of nonparticipating customers, customer-generators, and the utility as a whole.

This post-hearing brief[1] first provides an overview of how the solar choice provisions in Act 62 fit into a broader legislative framework designed to improve customer access to bill savings through investment in distributed energy resources—including rooftop solar—while reducing long-term costs to serve customers, benefiting all ratepayers. No single phrase or requirement should be read out of context when evaluating whether any proposal comports with the law. Next, we show how DESC's Solar Choice Proposal—as well as ORS's Proposed Modifications to that proposal—do not comply with Act 62's directives and must be rejected. Finally, we demonstrate that the Joint Solar Choice Proposal comports with the requirements of Act 62 and should be approved by this Commission.

[1] This brief will not cover every issue that is set forth in the accompanying partial proposed order of Joint Intervenors.

II. ARGUMENT

A. Act 62 sets forth a framework designed to improve customer access to bill savings through investment in DERs—including rooftop solar—while reducing long-term costs to serve customers, benefiting all ratepayers.

Throughout Act 62, the General Assembly repeatedly indicates its intent to support customers investing in rooftop solar and other DERs as a way to save money on their bills and provide benefits to all ratepayers. The first section of Act 62 directs the Commission to address "all renewable energy issues in a fair and balanced manner, considering the costs and benefits to all customers of all programs and tariffs that relate to renewable energy," not only as part of the utility's system, but also "as direct investments by customers for their own energy needs and renewable goals." S.C. Code Ann. § 58-41-05. Thus, the opening provision of Act 62 recognizes the benefits of renewable energy, not just the costs, and prioritizes direct investment by utility customers in rooftop solar to meet their own energy needs as part of South Carolina's energy future.[2] Moore Surrebuttal pp. 10-11.

In this same provision, the General Assembly requires the Commission to ensure that utility rate designs "properly reflect changes in the industry as a whole" and "the benefits of customer renewable energy, energy efficiency, and demand response." *Id.* These customer-sited measures are reflective of changes in the utility industry and the General Assembly recognized the benefits that all three can provide to the utility as a whole—both to those customers who directly participate and those who do not—by reducing cost of service. Tr. p. 868-69. In addition, this language reflects the legislative intent to accommodate a diversity of ownership of distributed energy resources, including

[2] Notably, the *only* two instances within Title 58 of the S.C. Code that contain an express statement of legislative intent are those within the Energy Freedom Act, specifically S.C. Code Ann. §58-40-20(A) and §58-41-40(A).

community solar and customer-scale rooftop solar. Moore Surrebuttal p. 11; *see also* S.C. Code Ann. § 58-41-40(A) (stating the General Assembly's intent "to expand the opportunity to support solar energy and support access to solar energy options for all South Carolinians, including those who lack the income to afford the upfront investment in solar panels or who do not own their homes or have suitable rooftops.").

The General Assembly's intent in enacting these provisions comes into sharper focus when Act 62 is viewed in its context. The suite of policies in Act 62 are a legislative response to the V.C. Summer debacle—not only to the V.C. Summer cost overruns and abandonment, but also to a system that concentrates all utility investment decisions with one entity and locks ratepayers into decades of costs in rate base. Tr. p. 829. Act 62 is designed to provide alternatives to monopoly utility investment in generation assets that otherwise impose significant costs on all ratepayers for decades. *Id*. Private investment in distributed rooftop solar puts downward pressure on DESC's need to invest in expensive new generation and transmission assets over the 25-year useful life of those investments. *Id.*; *see also* Tr. p. 767 ll. 5-10. Accordingly, Act 62 established new or enhanced requirements related to integrated resource planning, determining avoided costs for utility-scale renewable generators, and the interconnection and integration of utility-scale solar, and also included provisions to expand low-income access to solar and to revisit rate design to reflect a customer's right to engage in cost-saving measures such as efficiency and rooftop solar. Tr. pp. 838-39; Moore Surrebuttal p. 12. These forward-looking provisions ensure fair consideration of and access to renewable energy and customer-based demand-side resources, all of which are understandable in the context of the costs imposed on

DESC's ratepayers following the V.C. Summer abandonment. Moore Surrebuttal p. 12; Tr. p. 871.

Act 62's solar choice provisions likewise set out a framework to protect customers' access to rooftop solar, including by avoiding disruption to the solar market, and requiring that the benefits of solar be recognized and aligned with reducing utility costs so that all customers can benefit. Tr. p. 824. In light of this context, it is clear that Act 62 contemplates that solar choice tariffs be designed to allow for the continued growth of customer-generated rooftop solar as a way to, for example, reduce DESC's need to build new power plants, thus aligning the interests of customers who adopt solar with the interests of all ratepayers. Tr. p. 833.

Act 62's Enumeration of Electrical Utility Customer Rights

In Section 2 of Act 62, the General Assembly sets forth an "enumeration of electrical utility customer rights," finding a critical need to: (1) "protect customers from rising utility costs," (2) "provide opportunities for customer measures to reduce or manage electrical consumption from electrical utilities in a manner that contributes to reductions in utility peak electrical demand and other drivers of utility costs," and (3) "equip customers with the information and ability to manage their electric bills." S.C. Code Ann. § 58-27-845(A). Implicit in all three of these provisions is a recognition that customers are entitled and encouraged to take active steps that reduce their usage from the utility in ways that can lower their own bills and contribute to reductions in the utility's costs (by, for example, reducing system peak load or other drivers of utility costs).

The following provision makes this requirement explicit by providing that *every* customer "has the right to a rate schedule that offers the customer a reasonable opportunity to employ such energy and cost-saving measures as…onsite distributed energy resources in order to reduce consumption of electricity" from the utility, thus reducing the utility's costs. S.C. Code Ann. § 58-27-845(B). The General Assembly defined each customer's right to a rate that allows them to save money on their bills from the on-site production of clean electricity from rooftop solar.

In addition, when making its determination about whether rates are just and reasonable, the Commission is directed to consider whether any rate offered by a utility is designed to "discourage the wasteful use of public utility services" while also considering whether one class of customers (i.e. residential, industrial, etc.) is unduly burdening another class. S.C. Code Ann. § 58-27-845(C). Any tariff that encourages the wasteful use of public utility services in ways that disregard drivers of the utility's cost of service should be rejected as unjust and unreasonable. Read together, the enumerated customer rights in Section 2 of Act 62 direct the Commission to align customer demand reduction (from customer-scale rooftop solar, energy efficiency, and demand response) with utility cost reduction, creating win-win solutions. Moore Surrebuttal p. 13.

Legislative Intent of Solar Choice Provisions

Act 62's solar choice provisions make explicit the General Assembly's intent to "build upon the successful deployment of solar generating capacity through Act 236 of 2014 to continue enabling market-driven, private investment in distributed energy resources across the State by reducing regulatory and administrative burdens to customer installation and utilization of onsite distributed energy resources." S.C. Code Ann. § 58-40-20(A)(1). The General Assembly did not put any limitations on its intention to "*build*" upon the successful expansion of solar that Act 236 made possible, making plain its intent that the Commission reduce regulatory burdens that would otherwise be barriers to installing and using onsite rooftop solar. A utility rate, once set by the Commission, is a regulatory policy, and a solar choice tariff that imposes significant new fixed costs only on customers who adopt solar imposes new regulatory burdens on the installation and use of rooftop solar. Similarly, Section 58-40-20(A)(2) sets forth the General Assembly's intent to "avoid disruption to the growing market for customer-scale distributed energy resources," again without limitation or qualification. It is only in in Section (A)(3) that the General Assembly couched one declaration of legislative intent in qualifying language: the requirement that the Commission "establish solar choice metering requirements that fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent *practicable*."

When establishing a solar choice tariff, the General Assembly likewise directed the Commission to: (1) "eliminate any cost shift to the greatest extent practicable on customers who do not have customer-sited generation while also ensuring access to customer-generator options for customers who choose to enroll in customer-generator programs"; and (2) "permit solar choice customer-generators to use customer-generated energy behind the meter without penalty." S.C. Code Ann. § 58-40-20(G)(1). As with its first appearance in Section 58-40-20 (A), the direction to eliminate cost-shift in Section 58-40-20 (G)(1) is qualified with the phrase "to the greatest extent practicable," while the direction to ensure access to customer-generator options is expressed without qualification. Similarly, the directive to permit solar choice customer-generators to use electricity generated on site without penalty is absolute.

Cost-Shift in the Context of Act 62

Neither of the two "cost shift" provisions require that the Commission ensure solar choice tariffs eliminate all potential cost shift without consideration of other factors. Rather, both provisions include qualifying language directing the Commission to eliminate cost shift only "to the greatest extent practicable." "Practicable" is defined by Merriam-Webster dictionary as "feasible," "possible," "reasonable" or "capable of being done."[1] *See also* Moore Surrebuttal p. 18. Thus, even if there were evidence of a potential cost shift, the Commission may approve a solar choice tariff that reduces cost-shift only to such an extent that is feasible, or reasonably designed, in light of the broader—and higher priority—objectives in Act 62. *See Fox v. Moultrie*, 666 S.E.2d 915, 917 (S.C. 2008) ("In determining the plain meaning of a statute, the courts must look at the particular statutory language at issue and the language and design of the statute as a whole."). Act 62's requirement that solar choice tariffs "eliminate cost shift to the greatest extent practicable" must be read in conjunction with the other express statements of the legislature's intent and within the broader context of Act 62 discussed above. *See State v. Johnson*, 720 S.E.2d 516, 519 (S.C. Ct. App. 2011) ("All rules of statutory construction are subservient to the one that the legislative intent must prevail if it can be reasonably discovered in the language used, and that language must be construed in the light of the intended purpose of the statute." (quoting *State v. Sweat*, 688 S.E.2d 569, 575 (S. C. 2010)).

Conversely, an interpretation of Act 62 requiring that solar choice tariffs eliminate potential cost shift—even if doing so would penalize customer-generators' behind the meter usage, disrupt the solar market, or impose additional regulatory or administrative burdens for solar customers—would defeat the legislature's explicit statements of intent and directives, rendering them meaningless and leading to an absurd and clearly unintended result. *State v. Sweat*, 665 S.E.2d 645, 651 (S.C. Ct. App. 2008), *aff'd as modified*, 688 S.E.2d 569 (S.C. 2010) ("When interpreting a statute, courts must presume the legislature did not intend to do a futile act."); *Johnson*, 720 S.E. 2d 516, 520 ("[C]ourts will reject a statutory interpretation that would lead to an absurd result not intended by the legislature or that would defeat plain legislative intention." (citing *Town of Mt. Pleasant v. Roberts*, 713 S.E.2d 278, 283 (S.C. 2011))); *see also Ray Bell Constr. Co. v. Sch. Dist. of Greenville County*, 501 S.E.2d 725, 729 (S.C. 1998) ("However plain the ordinary meaning of the words used in the statute may be, the courts will reject that meaning when to accept it would lead to a result so plainly absurd that it could not possibly have been intended by the Legislature...").

The four words "eliminate any cost shift" occupied much time and attention at the hearing. But those four words are just one aspect of legislation intended to shape South Carolina's energy future, encourage innovative and forward-looking rate design, and expand renewable energy resources. When read as a whole, Act 62 requires a solar choice tariff structure that achieves complementary objectives: preserving customer access to bill savings from the adoption of distributed energy resources, including rooftop solar, while also reducing costs for all customers. *See* S.C. Code Ann. § 58-40-20(G)(1).

Successor Solar Choice Net Metering Tariffs vs. Solar Choice Net Metering Tariffs

"Successor" solar choice net metering tariffs and "solar choice net metering tariffs" can be considered synonymous for purposes of establishing the tariff in this docket. It is reasonable to interpret "successor" as referring to the solar choice tariff being a successor to the prior NEM programs authorized under Act 236. To interpret Act 62 otherwise would lead to results that are difficult to harmonize, in which key decisions—such as metering intervals, and whether mitigation measures are needed to transition existing customers—would be put off to an unforeseen future date and not considered at this time.

A way to ensure that both terms are given meaning is to conclude that "solar choice tariff" includes the tariffs applicable to current customers; thus, the Commission is directed to establish a "solar choice metering tariff" for customers that apply after May 31, 2021. Because such a tariff would be a "successor" to the current NEM tariffs, it would also be subject to additional requirements under Section 58-40-20 (F)(2).

B. DESC's Solar Choice Proposal violates the letter and spirit of Act 62\.

1. <u>Description of the Elements of DESC's Solar Choice Proposal</u>

To adequately understand how DESC Solar Choice Proposal is contrary to the intent and requirements set out in Act 62, one must first understand the following individual components that make up DESC's proposal.

Steep New Fixed Charges: Subscription Fee and Basic Facilities Charge Increase

The DESC Solar Choice Proposal would impose a new, fixed "Subscription" Fee ($5.40 per kW per month, or $43.20 per month for an 8 kW system, with a minimum of $16.20) and new BFC of $19.50. These new, unavoidable fixed charges alone—an additional $53.70 per month for a customer with an 8 kW system—make it nearly impossible for customers to install solar to save money on their monthly power bills from the self-consumption of electricity that they generate on-site. Combined with the low-value for export credits, a customer's private investment in rooftop solar provides little opportunity for bill savings from solar generation under DESC's proposed Solar Choice tariff. *See* Beach Direct p. 25.

Low Volumetric Energy Rates

The DESC Solar Choice Proposal includes a new, low "off peak" volumetric rate of $0.06735/kWh that is in effect for nearly all of the hours when solar PV produces electricity—including summer afternoons when the utility otherwise determines its coincident system peak—which sends a price signal to consume electricity during peak; the proposed super-low volumetric prices for electricity extend to periods when the Company otherwise charges on-peak prices to non-solar customers on existing time of use rates. *See* Tr. pp. 519-24; Barnes Direct p. 36. As DESC Witness Rooks admitted, these discounted rates are the principal way for solar customers to save money under the Company's proposal, meaning that any bill savings result not from the electricity produced from the customer's solar panels (whether consumed behind the meter or exported), but instead from purchases of electricity from DESC. Tr. pp. 524-25. As a result, it is only customers with abnormally high usage—typically customers with large houses—who could install small solar PV systems under DESC's proposed Solar Choice tariff with any hope of making an economic investment in a rooftop solar system. *See* Tr. p. 754.

DESC's Proposed TOU Periods

The DESC Solar Choice Proposal contains new peak and off-peak periods for solar customers that do not correspond to existing residential TOU rates, do not correspond to when the utility determines its system coincident peak, and result in very low off-peak prices for almost 92% of the hours in the year. For a two-hour window every day (except Sundays and holidays) during the summer months—between 2:00 and 4:00 pm—customers on DESC's Solar Choice Tariff Proposal would purchase energy at the low off-peak price of $0.06735/kWh, encouraging continued consumption from DESC during times when it otherwise experiences system coincident peak, while neighboring non-solar customers on Residential Rate 5 TOU are sent a dramatically different price signal—about four times higher per kW-hour. *See* Barnes Direct p. 36; Tr. pp. 519-24. One other perverse result of moving solar customers to unique TOU periods is that, during summer afternoons when non-solar residential customers under the existing Rate 5 TOU experience on-peak prices paid to DESC, a neighbor with solar panels could be supplying electricity at an off-peak export rate that DESC marks up about 645% — DESC would credit the solar customer at the avoided cost rate of $.03522 and sell that same electricity "on-peak" to the Rate 5 TOU neighbor at $0.27036/kWh. Rooks Direct p. 7 (avoided cost rate).

Dramatic Change to Netting Period

The DESC Solar Choice Proposal would dramatically change the netting period compared with the current NEM program, from monthly netting with roll-over credits at retail rates until the end of the year to fifteen-minute interval netting with all exports credited at low avoided cost rates. Rooks Direct pp. 6 – 7; Tr. p. 477, ll. 17-21. From the DESC Proposed "Subscription Solar Choice" tariff, the netting interval is not made explicit to potential solar choice customers. Hearing Exhibit 6 [Rooks Direct Ex. AWR-1]. However, the result of this component, as acknowledged by Witness Everett, is to increase the amount of solar production from a customer-generator that is considered an "export" and thus credited at lower avoided cost rates rather than retail rates. Everett Direct p. 52. Witness Barnes described this sweeping overhaul of netting as "punitive" and was unable identify any jurisdiction that had gone from net metering to "monetary crediting for all exports" at low avoided cost rates.[3] Barnes Direct p. 11.

Low Export Credits for Excess Solar Generation

The DESC Solar Choice Proposal includes a low export credit of $0.03622/kWh for excess solar generation, even during times when the utility otherwise charges a premium for on-peak electricity use for existing TOU customers. Because of the radical change in netting periods (from monthly netting with retail-rate rollover credits on an annual basis to 15-minute interval netting), far more of a customer-generator's solar production will be classified as an export and credited at low PURPA avoided cost rates. DESC Witness Everett suggested these low rates were the appropriate value of solar with reference to PURPA avoided cost rates. Tr. p. 230, ll. 20-24. But Act 62 does not limit the benefits of solar to PURPA avoided cost rates. Instead, Act 62 established entirely separate requirements for PURPA avoided cost proceedings. *See* S.C. Code Ann. § 58-41-20. The PURPA avoided cost provisions are not referenced at all within the solar choice provisions of the Act. *See* S.C. Code Ann. § 58-40-20; *see also Johnston v. City of Myrtle Beach*, 321 S.E.2d 627, 628 (S.C. Ct. App. 1984) ("Statutes in pari materia ... have to be construed together and reconciled, if possible, so as to render both operative."). Put simply, the avoided costs of distributed solar are not equivalent to PURPA avoided costs.

[3] To make matters worse, DESC is not content to simply earn the difference between those exported kilowatt hours—credited to customer generators at PURPA avoided cost rates—and the retail rate that neighboring customers pay for that electricity. Instead, DESC plans to also seek recovery of those avoided cost credits from all ratepayers in the fuel docket. Rooks Direct p. 10. In essence, DESC is seeking to double recover from ratepayers: first from neighbors of customer generators (who purchase that excess solar production from DESC at retail rates) then again from all ratepayers to recover the bill credit "paid" to customer generators.

2. DESC's Solar Choice Proposal will slash customer bill savings opportunities, disrupt the growing market for residential rooftop solar, increase utility costs, and penalize behind the meter usage contrary to the express intent of the General Assembly in passing Act 62.

All together, these elements of DESC's Solar Choice Proposal, in clear violation of Act 62, impose new burdens on customer-generators, dramatically reduce bill savings, promote the wasteful use of electricity, penalize behind the meter consumption of customer-generated solar, artificially reduce the size of systems (so that it would be uneconomic to install a rooftop solar array that is capable of offsetting all of a customer's energy use), fail to address mitigation measures, and disrupt the growing market for residential and small commercial rooftop solar in violation of Act 62. In support of its proposal, DESC principally argues that its Solar Choice Proposal eliminates a supposed "cost-shift" to non-solar participants. However, DESC has failed to establish a cost shift as that term is used in Act 62; DESC's cost shift argument is unsupported by the analyses required by Act 62 to evaluate embedded or marginal costs and benefits. The Commission must therefore reject the Company's proposal.

Dramatically Reducing Bill Savings

The General Assembly stated its intent that the customer scale solar programs should "build upon the successful deployment of solar generating capacity through Act 236 of 2014 to continue enabling market-driven, private investment in distributed energy resources" and "avoid disruption to the growing market for customer-scale distributed energy resources. *See* S.C. Code Ann. § 58-40-20(A)(1)-(2). The General Assembly further directed the Commission to "compensate customer-generators for benefits provided by their generation" and "ensur[e] access to customer-generator options." S.C. Code Ann.

§ 58-40-20(F)(3), (G)(1). Thus, a solar choice tariff that eliminates bill savings to such an extent that solar is no longer economical violates the legislative objectives set out in Act 62.

DESC, however, designed its proposed tariff explicitly to all but eliminate the opportunity for bill savings to solar customers, without regard to the benefits that rooftop solar can provide to the utility. As DESC Witness Everett testified, the DESC Solar Choice Proposal was designed to be "revenue-neutral," meaning that it was designed to ensure that a customer's bill, and the Company's corresponding revenue, remained about the same after investing in solar. *See* Tr. pp. 258-59. As a result, customers who install solar under the DESC Solar Choice Proposal to offset some or all of their home energy needs would have the majority of their potential bill savings clawed back by DESC through the combination of new, fixed fees and customer charges along with rates that are designed to undervalue both self-consumption and exports of rooftop solar electricity. For the average customer, [4] the DESC Proposed Solar Choice Tariff would reduce bill savings by 55%. Beach Direct p. 22.

In this way, solar customers are unfairly singled out to not receive the full benefit from their private investment in on-site technology that otherwise offsets a significant amount of their on-site energy needs. In contrast residential customer who switches to a gas utility for hot water and space heating needs would receive the full value for their reduced electricity use at the retail rate; for every kilowatt-hour less that they spend on electricity as a result of switching to gas appliances, they receive a corresponding savings at the retail rate on their electricity bill. The same would continue to be true for a customer

[4] Defined as a customer with an average monthly energy usage of 1000 kWh and with an 8kW rooftop solar system installed.

who adopts energy efficiency measures that result in consuming less electricity. *See* Tr. pp. 267-68; Barnes Direct p. 52, ll. 9-11.

Disrupting the Solar Market

Moreover, the absence of adequate compensation for solar customers under the DESC Solar Choice Proposal would guarantee disruption in the South Carolina solar market in direct violation of Act 62's intent. NCSEA/SEIA Witness Barnes found that the reduction in customer savings would be dramatic for systems that are sized to offset a significant amount of a customer's load. Barnes Direct pp. 59-60. The payback periods associated with this reduction in bill savings increases from 9.4 years under current NEM tariff to 20 years. Beach Direct p. 24. For the many customers who lease rooftop solar, the reduction in bill savings is enough to discourage investment in distributed solar altogether. *See* Barnes Direct p. 75.

Even DESC witnesses acknowledged that a solar choice tariff that reduced bill savings so drastically may disrupt the solar market. *See* Tr. pp. 352-53 (acknowledging it's "definitely a possibility" that "less ratepayers…will decide to install rooftop solar because the benefits are not the same"); Tr. pp. 456-57 (acknowledging, with reference to Nevada, that it was possible that solar installers may get out of the business because it is no longer profitable).

Promoting the Wasteful Use of Electricity

The *only* customers who would potentially realize savings that could justify the expense of a rooftop solar system under DESC's Solar Choice Proposal are those customers with high energy consumption and very small solar systems that are not sized to offset a significant portion of their energy use. Such customers benefit from the low volumetric rates in DESC's proposal so long as the per-kilowatt Subscription Fee is close to the minimum charge of $16.20. For this reason, Joint Witness Beach labels the DESC Solar Choice Proposal a "McMansion Rate," meaning that the rate is highly favorable for large and inefficient customers with minimal solar systems. Beach Direct p. 27; Tr. p. 754. As DESC Witness Rooks acknowledged, the savings these customers see would not result from the customer's solar energy production, but rather from their energy consumption. Tr. p. 524, l. 22 – p. 525, l. 3. DESC thus incentivizes increased energy consumption with discounted rates—even during on peak periods for the rest of the customer class—while at the same time imposing fixed fess that make solar uneconomic for smaller, more efficient electricity consumers or for customers who seek to invest in solar to offset most or all of their energy use. Barnes Direct pp. 66-67.

This rate design runs counter not only to the solar choice provisions in Act 62, but also to the broader statements of legislative intent in the Energy Freedom Act that customers should be afforded opportunities to manage their bills and save money from reducing their usage of electrical utility service, including from the use of onsite rooftop solar, and be allowed to self-consume on-site generated electricity without penalty. In addition, rewarding inefficient energy use ignores the General Assembly's finding that there is "a critical need…to provide opportunities for customer measures to reduce or manage electrical consumption from electrical utilities in a manner that contributes to reductions in utility peak electrical demand and other drivers of electrical utility costs," S.C. Code Ann. § 58-27-845(A)(2); the inefficient energy consumption rewarded under DESC's Solar Choice tariff would also drive up peak demand and therefore utility costs for all ratepayers. At the hearing, DESC counsel objected to questions about Act 62's enumeration of electrical customer rights as being irrelevant, and DESC's head of electric rates Witness Rooks admitted that he did not know about this section of the statute or consider its enumerated rights in developing the DESC proposal. Tr. pp. 531, 533, 539-40. DESC's position that this statute is irrelevant is incorrect; these provisions apply to *all* electrical customers and to the Commission's obligation to set just and reasonable rates generally, including new solar choice tariffs.

Penalizing Behind the Meter Usage

DESC's elimination of solar customer bill savings through its proposal with a combination of a large fixed Subscription Fee and BFC further violates Act 62 by effectively penalizing behind the meter energy consumption. *See* S.C. Code Ann. § 58-40-20(G)(2). For example, under the DESC Solar Choice Proposal, before consuming any energy supplied by the DESC system, a Solar Choice customer with an 8 kW system who self-consumes 400 kWh behind the meter without consuming any electricity from DESC sees no real savings when compared to a regular customer under Rate 8 without solar who has not self-generated any electricity and consumes 400 kWh from DESC. Any savings the solar customers might have achieved through behind the meter production is more than canceled out by a fixed Subscription Fee and BFC totaling $62.70, whereas it costs a regular customer only $55 to pay fixed charges and purchase energy from DESC. In other words, under DESC's Solar Choice Proposal customers are charged extra for producing their own energy.

Witness Beach described the imposition of this large fixed fee on solar customers as a penalty "because it doesn't reflect the fact that distributed solar actually can avoid transmission-and distribution costs, and it treats …distributed solar as not being able to avoid those costs at all by establishing that fixed subscription fee." Tr. p. 762. Indeed, neither of the fees penalizing behind the meter usage actually reflect cost to serve solar customers. DESC justifies this new fixed Subscription Fee based on the incorrect assumption that all T&D costs are "fixed" as opposed to determining the T&D costs associated with solar customers based on a cost of service analysis and actual cost causation, as they do for other customers. Beach Direct pp. 29-31. This approach is inconsistent with DESC's own classification of most distribution costs as "demand related," or dependent of the customer's varying levels of demand, in its rate case, *id.*; DESC in fact allocates transmission costs based on the summer coincident peak, when rooftop solar helps to reduce demands on the utility's transmission system. Similarly, the new proposed BFC of $19.50 is proposed to recover all of DESC's supposed "customer-related costs." *See* Rooks Direct p. 6. But DESC's calculation of "customer-related" costs in its embedded cost of service study include distribution grid assets that are more correctly classified as demand related, including a significant portion of the Company's poles, wires, and transformers. Docket No. 2020-125-E, Direct Testimony of Kevin Kochems, p. 16 ll. 9-12, Ex. KRK-1 p. 3. Removing those demand-related costs from the Company's classification of "customer-related" costs removes any justification to impose a higher BFC on solar choice customers.

Failing to Consider Mitigation Measures for Existing Customers

Act 62 requires the Commission to consider when developing the appropriate billing mechanisms in a solar choice metering tariff "whether additional mitigation measures are warranted to transition existing customer-generators." S.C. Code Ann. § 58-

40-20 (F)(3)(c). Given the drastic changes DESC is proposing, this would seem to be a particularly important consideration. Yet, Witnesses Everett and Rooks testified that the delayed implementation for existing solar customers was sufficient. Tr. p. 283, l. 15 – p. 284, l. 2; Tr. p. 558. When pressed further about what alternatives would be available to existing customer-generators when their settlement rights to receive full retail net metering expire, DESC produced an apparent ad hoc collection of options that included a buy-all, sell-all option and a so-called "offset only" option.

The buy-all, sell-all ("BASA") option prohibits a customer from consuming power behind the meter. They are instead compelled to purchase all electricity consumed onsite from DESC at full retail rates and forced to sell all output of their solar facility at the published avoided cost rate. Besides being financially unattractive, this option by definition would transform the existing customer-generator to a QF, as they would no longer be using the system "primarily to offset part or all of the customer-generator's electrical energy requirements." S.C. Code Ann. §58-40-10(C)(5). The BASA option is thus not a customer-generator option and does not satisfy the requirement in Act 62 that DESC provide a solar choice tariff that does not penalize behind the meter consumption of self-generation.

The "offset only" option purports to provide a customer the "right" to utilize their self-generation behind the meter without penalty, but it fails to provide any compensation for generation that exceeds the real-time needs of the customer as envisioned in Act 62. *See also* S.C. Code Ann. § 58-40-20(F)(3) (requiring customer-generators to be compensated for the benefits of their generation to the power system). This option also requires customer-generators to forego their rights under federal law to, at a minimum, be compensated for as-available energy at the avoided cost rate. 16 U.S.C. § 824a-3(a).

Customer-generators should not be required to donate valuable generation to the utility that they don't consume in real-time (and that DESC in turn sells to neighboring customers at full retail rates) in order to have an option that does not penalize behind-the-meter usage.

3. Act 62 provides two possible frameworks for how cost shift can be calculated; DESC used neither. Under both those frameworks, there is no evidence of a cost shift.

DESC attempts to justify its radical and unfair proposal by claiming that it is necessary to address "cost shift" to non-solar customers.[5] *See, e.g.* Rooks Direct p. 9; Everett Direct pp. 2-4. But DESC (1) wrongly conflates *bill savings* that customer-generators can achieve from behind the meter consumption and excess exports with cost shifts; (2) wrongly claims that the only benefits of rooftop solar are equivalent to PURPA avoided costs, despite Act 62's entirely different requirements for valuing distributed rooftop solar and avoided costs for utility scale solar; and (3) fails to comply with Act 62's method for evaluating potential cost shifts, which includes both an embedded cost of service analysis (backwards looking) and a marginal cost analysis (forward-looking) that considers long-term benefits and costs. In short, DESC's proposal is legally deficient because it fails to account for quantifiable benefits of solar and ignores the cost-benefit evidentiary requirements established by Act 62.

Act 62 contemplates how cost shift should be calculated.

The General Assembly set forth its intent to "establish solar choice metering requirements that *fairly allocate costs and benefits* to eliminate any cost shift or

[5] According to DESC's calculations, this supposed cost shift amounts to $1.38 per month per residential customer (if the current NEM tariff continued after May 31). As set forth below, this figure incorrectly assumes that bill savings achieved by customer generators are the same thing as a cost shift.

subsidization associated with net metering to the greatest extent practicable." S.C. Code Ann. § 58-40-20 (A)(3). Fairly allocating the costs and benefits of rooftop solar is a prerequisite to determining whether and to what extent a potential "cost shift" exists. Sections 58-40-20 (C) and (D) provide further direction to the Commission about how to evaluate these costs and benefits. Section 58-40-20 (C) required the Commission establish a generic docket to "investigate and determine the costs and benefits of the current net energy metering program" and "establish a methodology for calculating the value of the energy produced by customer-generators." Section 58-40-20 (D) requires the Commission, in that generic proceeding, to consider benefits including "the aggregate impact of customer generators on the electrical utility's long run marginal costs of generation, distribution, and transmission," the value of distributed energy resource generation according to the methodology approved by the commission in Commission Order No. 2015-194, "the direct and indirect economic impact of the net energy metering program to the State," and "any other information" the Commission deemed relevant. S.C. Code Ann. § 58-40-20 (D). The Commission is also directed to consider, among those other factors, the "*cost of service* implications of customer generators on other customers within the same class, including *an evaluation of whether customer generators provide an adequate rate of return to the electrical utility compared to the otherwise applicable rate class when, for analytical purposes only, examined as a separate class within a cost of service study*." S.C. Code Ann. § 58-40-20 (D)(2). Customer classes are evaluated in a cost of service study in a rate case based on load research conducted on a statistically significant sample of the class; without this necessary analysis, the Commission cannot assume the cost of service implications of customer-generators or presume the existence of a cost shift.

Act 62's specific requirements for solar choice tariffs then immediately follow the cost-benefit provisions of Section 58-40-20 (C) through (E). Section 58-40-20 (F)(1) states that the Commission, in establishing successor solar choice metering tariffs, must determine a metering measurement that is "just and reasonable in light of the *costs and benefits* of the solar choice metering program." S.C. Code Ann. § 58-40-20 (F)(1) (emphasis added). It further requires that solar choice tariffs "include a methodology to compensate customers *for the benefits provided by their generation to the power* system." S.C. Code Ann. § 58-40-20(F)(3) (emphasis added). It would make no sense for Act 62 to direct the Commission to fully investigate and re-evaluate the costs and benefits of solar, but then ignore those results when establishing solar choice tariffs that will apply to all rooftop solar customers from June 1, 2021 onward. *Sweat*, 665 S.E.2d at 651; *see also A.O. Smith Corp. v. S.C. Dep't of Health & Env't Control*, 833 S.E.2d 451, 459 (S.C Ct. App. 2019) ("[T]he statute must be read as a whole and sections [that] are part of the same general statutory law must be construed together and each one given effect.").

Taken together, Act 62's provisions show that a cost shift *may* occur from an embedded cost of service perspective if customer-generators do not provide an adequate rate of return to the electrical utility compared to the otherwise applicable rate class when considered as a separate class, for analytical purposes only. In addition, these provisions indicate that "cost shift" may be determined by conducting a full evaluation the costs and benefits of solar, provided such an evaluation accounts for the aggregate "long-run" benefits of rooftop solar from a marginal cost of service perspective as required by Section 58-40-20(C)(1).

Instead of conducting the required analysis, DESC improperly conflated bill savings with a "cost shift," which is entirely contrary to Act 62.

DESC, however, ignored Act 62's directives regarding cost-shift. Rather than conducting the required cost-of-service analysis necessary to evaluate any potential cost shift as required by S.C. Code Ann. Section 58-40-20(D)(2), DESC instead conflated "cost shift" with *bill savings* that customers receive from rooftop solar, both from behind the meter consumption of on-site solar generation and from exports of excess generation. With only a minor adjustment at PURPA avoided cost rates for an assumed 3 kilowatt PV system, DESC labeled those bill savings currently enjoyed by NEM customers a "cost shift." *See* Tr. pp. 258-59, 505-06. As a result, DESC's concern about a present tense "cost shift" is better understood as worry over lost revenue to the utility from customers who lease or purchase solar PV systems. Though this shorthand of "cost shift" to mean bill savings was used by ORS witnesses as well,[6] the Commission should not equate one with the other.

Throughout the hearing, DESC defended this methodology with reference to the existing DER NEM incentive[7] as evidence of cost shift under solar choice tariffs. That cost-recovery mechanism, which is capped at $1 per month for residential customers and permits utilities to recover a portion of lost revenues in a rider on retail customer bills, will

[6] ORS Witness Lawyer confirmed ORS's understanding of cost shift was bill savings. Tr. p. 996. ORS Witness Horii even conflated bill savings with "cost shift" when describing another witness's testimony. Witness Horii objected to the Joint Solar Choice proposal because witness Beach only identified an "8 percent reduction" in cost shift. Tr. pp. 1100-01. But Witness Beach did not identify an 8 percent reduction in "cost shift," but rather an 8 percent reduction in bill savings between the current residential NEM program and the Joint Solar Choice Proposal. Beach Direct p. 13. *See also* Everett Direct pp. 18, 19, 23, 24, 26, 32 (equating bill savings with cost shift).

[7] Even when considering both the cost to serve solar customers and the benefits of distributed energy resources to the utility as a whole, customers do not cause a cost-shift if they remained under the existing retail-rate NEM program. *See* Hearing Exhibit 11.

no longer be available to the utility in relation to customers who adopt a solar choice tariff as of June 1 of this year. Act 62 prohibits utilities "from recovering lost revenues associated with customer-generators who apply for customer-generator programs on or after June 1, 2021"—when the Solar Choice tariffs go into effect. S.C. Code Ann. § 58-40-20(I). Thus, DESC's repeated invocation of the DER NEM incentive, a soon to be outdated cost recovery mechanism, as evidence of a "cost-shift" for solar choice customers was simply incorrect.

Moreover, when pressed on how exactly a customer who installs solar after May 31 of this year could cause costs to "shift" to non-participating customers, DESC witnesses acknowledged that no such mechanism exists for imposing costs on nonparticipating customers. It is vital that the Commission recognize the following facts, so as not to let an illusory "cost-shift" argument defeat the overarching goals of Act 62: bill savings can only transform into a cost-shift if (1) almost none of the short and long run benefits of solar are considered, (2) if DESC later asks to recover any resulting drop in short-term revenue from its customers in a future rate case, and (3) this Commission allows that recovery in a base rate case. *See* Tr. pp. 254-55. Until and unless that happens, the Commission should understand that DESC's use of the term "cost shift" means "lost revenue to DESC resulting from bill savings from customer-generators' use of rooftop solar."

In reality, cost shift does *not* mean customer bill savings. Such a simplistic definition is contrary to the Act. Act 62 explicitly requires that a solar customer be "compensated" for the benefits of solar and that *all* customers have the opportunity to achieve cost saving through distributed solar. It would be illogical for Act 62 to direct the Commission to protect a customer's right to such bill savings and at the same time require that nearly all of those savings be eliminated to the greatest extent practicable. Moreover, as Witness Barnes explained, determining cost shift is more complex than mere lost revenue: "a solar customer's approximate responsibility for embedded costs (i.e., their cost of service) is determined by their actual usage characteristics as modified by on-site solar generation and assessed against cost causation factors (e.g., contribution to system peak loads)." Barnes Surrebuttal p. 6; *see also* Barnes Direct pp. 18-19. Thus, any determination of "cost-shift" requires a specific cost of service study, which DESC decided not to conduct. Tr. pp. 370, 550. [8]

There is no evidence of a potential "cost shift" when reviewing DESC's embedded cost of service study.

Despite DESC's failure to conduct the cost of service analysis required by Act 62, Witness Barnes determined based on his review of DESC's embedded cost of service study and other available data that any supposed cost shift from solar to non-solar customers is minimal or non-existent. Barnes Direct pp. 22-25; Barnes Surrebuttal p. 18; Tr. p. 946, ll. 3-11. This is because "solar customers provide a considerable benefit to their respective classes for production and transmission demand-related costs because the timing of the peak matches well with good solar production." Barnes Direct p. 20. Witness Barnes estimated based that costs allocated the residential class would have been roughly 0.33% higher (47.07% vs. 46.74%) had there been no residential solar on the DESC system, meaning that without solar customers, the residential class would have been allocated an

[8] In fact DESC Witness Everett explicitly acknowledged that she had not look at solar customers' contribution to reducing the summer coincident peak in developing the DESC Solar Choice tariff. *See* Tr. pp. 251-52 ("Q: So you did not look, [DESC Witness] Everett, to determine whether or not the residential solar customer in Dominion's territory contributed to a reduction in that summer coincident peak, did you? A: I—no, becau—no, I did not").

additional $787,000 in DESC's most recent rate cases, or $0.01159/kWh. *Id.* pp. 22 – 23. Witness Barnes' testimony thus demonstrates how "solar customers as constituents of a broader class can provide considerable benefits to that class in the form of a reduction in the allocation of embedded costs." *Id.* p. 24. Even so, Witness Barnes reiterated that Act 62 requires the Commission to balance cost-of-service considerations with other public policy objectives, and that because solar choice tariffs are forward-looking while cost of service studies are backwards-looking, an embedded cost of service analysis should not be fully determinative. Barnes Surrebuttal p. 9, ll. 1-5.

Witness Beach further noted that Witness Everett's residential load and solar profiles showed that, in the top 10% of residential peak demand hours, solar customers reduced peak loads by 29% of solar nameplate capacity; according to Witness Beach, this provides further evidence that distribution costs, like transmission costs, are not "fixed" costs that solar customers cannot avoid. Beach Direct p. 30, l. 1 – p. 31, l. 11.

In short, the evidence demonstrates that solar customer reduce utility costs across their customer class. Without accurately quantifying those cost reductions, such as avoided T&D costs, and comparing them to the cost to serve solar customers, DESC cannot represent that there is in fact a cost-shift.

When all the benefits of distributed solar are counted, there is no evidence of a "cost shift."

Relatedly, for there to be such a shift, the costs of solar would have to outweigh the benefits. If the Commission rejects DESC's artificially low value of solar (an issue before this Commission in three different open dockets: this Solar Choice docket, the generic methodological docket (No. 2019-182-E), and the fuel cost docket (No. 2021-2-E)) and includes a reasonable value other than zero for the various categories of benefits in the existing value stack, any potential reduction in revenue (and thus, any potential justification for a potential future cost shift) would be eliminated or reduced. For example, Joint Witness Beach's testimony in the generic methodological docket demonstrates that, when considering the full life-cycle of rooftop solar under accepted cost-effectiveness tests, the benefits of distributed solar outweigh any costs to non-participating customers, and thus there is no potential cost-shift even under the current NEM program. See Hearing Exhibit 11 [Beach Direct, Beach Direct, Ex. RTB-2].

An analysis that considers costs and benefits is required by Act 62, which directs the Commission to consider "the costs *and benefits* to all customers of all programs and tariff that relate to renewable energy" and "the value of distributed energy resource generation according to the methodology approved by the commission in Commission Order No. 2015-194." S.C. Code Ann. §§ 58-41-05, 58-40-20 (D)(3). Act 62 further requires consideration of the long-term benefits of solar, directing the Commission to consider "the aggregate impact of customer generators on the electrical utility's *long-run* marginal costs of generation, distribution, and transmission." S.C. Code Ann. § 58-40-20 (D)(1) (emphasis added). Yet, DESC's analysis ignores quantifiable benefits of solar and fails to consider cost and benefits over the entire life cycle of the solar PV.

Specifically, DESC's proposed value of solar does not consider avoided T&D costs or other benefits of distributed solar, such as avoided carbon and fuel hedge that the Commission adopted in Order No. 2015-194.[9] These benefits are concrete and measurable

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[9] Pursuant to Order 2015-194, the value of solar includes the following components:
+/- Avoided Energy
+/- Energy Losses/Line Losses
+/- Avoided Capacity
+/- Ancillary Services
+/- Transmission and Distribution ("T&D") Capacity
+/- Avoided Criteria Pollutants

and, as a result, DESC's value of solar is artificially low. At the hearing, Witness Beach gave one example of the benefits DESC ignores in its valuation of solar; he explained, with respect to the avoided T&D cost benefits, that "a 7 kilowatt system that's serving 80 or 90 percent of the customer's usage" will produce more power than the customer uses in the middle of the day "and that power will go out to the grid and serve the customer's neighbors" and "when the power goes out to the grid, it doesn't go very far. It serves…the neighbors [a]nd it displaces power that the utility would have to generate in a far-off power plant and then transmit and distribute over its wires to reach those neighboring customers." Tr. pp. 789-90. As a result, because the customer-generator's investment "frees up space in the utility's wires that it can use to serve other customers[,]… transmission-and-distribution costs are avoided by distributed solar; you're putting generation right down where the load is, and you need a few hundred feet of wires instead of, you know, hundreds of miles of wires." *Id.* Thus, by ignoring this contribution of solar, DESC is undervaluing the avoided cost benefits provided by solar. DESC Witness Everett's characterization of societal benefits of solar as "hypothetical" is also not such supported by today's science; as Witness Beach observed, the health benefits from reductions in criteria air pollutants and benefits of reducing the societal damages from climate change are not hypothetical. Beach Surrebuttal p. 17. DESC itself includes a price on carbon for purposes of its long-term planning in its IRP, and it is thus reasonable to consider distributed solar's

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+/- Avoided CO2 Emission Cost
+/- Fuel Hedge
+/- Utility Integration & Interconnection Costs
+/- Utility Administration Costs
+/- Environmental Costs
= Total Value of NEM Distributed Energy Resource

contribution to advancing the utility's carbon reduction goals that it would otherwise pay for with ratepayer funds.

Further, DESC failed to consider cost and benefits *over the entire life cycle of the solar PV*. As Witness Beach explained, a short-term view of NEM costs and benefits reflects only the energy benefits of NEM, which are recognized immediately as the solar system displaces energy that the utility would have to produce, but "the capacity-related benefits are the kind of thing that will happen over the long run, over time, over multiple rate-case cycles. The utility will not have to spend as much on its transmission-and-distribution system as it would have if the distributed solar didn't exist." Tr. p. 766. Another illustrative example provided by Witness Beach relates to fuel hedge. Renewable generation provides a long-term hedge against volatile fuel costs for the entire 25-year life of a solar unit; however, DESC underestimates this component by focusing on costs of existing utility hedging programs, which only reduce volatility in the next one to three years. *See* Hearing Exhibit 11 [Beach Direct, Ex. RTB-2 at 1, 13]. DESC's limited consideration of the costs and benefits of distributed solar thus fails to accurately capture the full benefits, in addition to falling short of Act 62's requirement to consider "aggregate," "long run" impacts of NEM. Long-term consideration of energy resources is also in line with how DESC evaluates other resources; when a utility considers building a new power plant, it looks at the cost and benefits over the power plants entire useful life.

C. ORS's Proposed Modifications to DESC's Solar Choice Proposal would even further reduce bill savings in violation of Act 62.

ORS accepted at face value DESC's simplistic definition of "cost-shift" as any reduced revenue to DESC in the form of bill savings that current NEM customers realize (with some offset at PURPA avoided cost rates as the supposed value of distributed solar).

ORS approved of DESC's proposal with slight modifications to the Subscription Fee and TOU rates to further erode bill savings for future solar choice customers; ORS otherwise accepts DESC's proposal to increase the BFC to $19.50, switch to netting over a 15 minute period, and decrease the on- and off-peak volumetric rates. Horii Direct pp. 11-16. ORS's ultimate recommendations were based solely on one factor: eliminating all potential cost-shifts. As ORS witness acknowledged at the merits hearing, the Commission is not free to ignore the various other mandates of Act 62 and focus only on a few words of the statute in isolation. As a result of ORS's narrow focus and improper assessment of potential cost shift, its recommendation must be rejected by the Commission.

1. ORS's proposal is incomplete, as it expressly does *not* evaluate several factors the Commission is required to consider in evaluating a solar choice tariff.

As ORS witnesses acknowledged, its proposal did not take into consideration any provision, statement of legislative intent, or directive other than the four words "eliminate any cost shift" that appear twice in the solar choice section of Act 62. Its proposal is based on an attempt to eliminate all potential bill savings (with a small allowance for avoided cost benefits), which it equated with a cost shift. ORS did not limit its efforts to reducing bill savings "to the greatest extent practicable." ORS Witness Lawyer testified that the exclusive purpose of ORS's testimony in this docket was to address cost shift and Witness Horii testified that he was asked by ORS to focus only on eliminating cost shift. Tr. pp. 979, 1100-01. Because ORS's recommendation is based on four words from Act 62 without consideration of the other directives that the Commission must consider, its recommendation should be afforded no weight and must be rejected.

2. <u>ORS's proposal would even further reduce customer bill savings.</u>

Under ORS's analysis, its proposed modification to DESC's Solar Choice proposal would reduce the bill savings when compared to current NEM from about $190 per kW in annual savings to about $60 in annual savings. Horii Direct pp. 22-23. Witness Beach estimated that ORS's proposed modifications would reduce bill savings when compared to the current NEM program by 63%. Beach Surrebuttal p. 4. When accounting for the cost of a solar PV system, Witness Beach observed that the typical residential customer would see "their costs increase by $0.03 to $0.06 per kWh of solar output, compared to not adopting solar." *Id.* p. 5. For a typical customer, as system sizes decrease and provide a smaller share of a customer's load (down to 10%), the reduction in savings when compared to current NEM rates from ORS's proposal are reduced by 92%. *Id.* p. 6. Witness Beach concludes that "the ORS modifications would remove any economic incentive to install a solar system of any size" and would require about 25 years to achieve simple payback. *Id.* pp. 9-10.

3. <u>ORS did not look at benefits of solar and based its cost-shift calculations on a cost of service methodology not employed by DESC.</u>

To support his identification of cost shift, Witness Horii selectively based his assessment on the costs and benefits of solar based on numbers that artificially reduced solar's value to DESC's ratepayers and artificially inflated potential cost shifts. First, despite his prior testimony in the generic docket (No. 2019-182-E) that any calculation of the benefits of solar should include distributed solar's contribution to avoided utility transmission and distribution costs, Witness Horii included no value for avoided T&D in his calculations.

Next, when reviewing potential cost shift from an embedded cost of service perspective, Witness Horii used a different methodology than DESC actually uses. By ignoring DESC's use of the summer coincident peak method for allocating the utility's generation and transmission costs, Witness Horii significantly understated rooftop solar's contribution to reducing the residential class's contribution to system peak. By the same token, Witness Horii did not take into account solar's actual contribution to reducing non-coincident peak demand, thus understating rooftop solar's contribution to reducing demand-related distribution grid costs otherwise allocated to the residential class. Barnes Surrebuttal pp. 11 – 18; Tr. p. 909, ll. 13-24.

It is inappropriate to evaluate the embedded cost to serve solar customers in DESC's territory based on a different methodology than the Company uses to evaluate the cost to serve all other residential customers. It moves the goalposts in a way that is unfair and makes it impossible to compare otherwise similarly situated residential customers. Tr. p. 964. Using Witness Horii's methodology for calculating the embedded cost to serve, but with a corrected coincident peak allocator, reduces the potential cost-shift (as defined by DESC and ORS) to roughly $57 per year per customer-generator. Barnes Surrebuttal p. 15. Further correcting for Witness Horii's artificially low solar capacity factor when considering solar customers' contribution to reducing demand-related distribution costs under DESC's non-coincident peak allocator, the potential cost shift is reduced even further (to something between $3 and $22 per year). *Id.* p. 16. In other words, the supposed embedded cost shift, even as defined by ORS, is effectively zero when using DESC's actual coincident peak allocator and solar's contribution to reducing maximum class non-coincident peak demand.

D. Joint Intervenors' Solar Choice Proposal satisfies all requirements of Act 62.

1. Description of the Elements of the Joint Solar Choice Proposal

As described in the testimony of Witness Beach, the Joint Solar Choice Proposal has the following features:

(1) a requirement to take service under Rate 5 TOU rates, which provides a more accurate and cost-based rate that can also serve as a platform for additional DERs that customer-generator may adopt (such as electric vehicles).

(2) a minimum bill based on properly calculated customer-related costs. The Joint Solar Choice Proposal proposes a $13.50 minimum bill (which would include the $9.00 BFC), subject to change based on the outcome of DESC's current rate proceeding.

(3) maintaining annual netting, but crediting excess on-peak generation against on-peak usage (and excess off-peak generation against off-peak usage), with any excess exports credited at PURPA avoided cost rates at the end of each year, which encourages sizing of systems to no more than offset their annual usage.

Beach Direct p. 12, l. 6 – p. 13, l. 7.

2. The Joint Solar Choice Proposal is the only proposal that fulfills the intent of Act 62.

Act 62 requires the Commission to balance the interests of all ratepayers, including customer-generators and non-participants when establishing solar choice tariffs, and to avoid disrupting the growing solar market in South Carolina. S.C. Code Ann. § 58-40-20. Unlike the proposals presented by DESC and ORS, the Joint Solar Choice Proposal fulfills each of these requirements.

Consistent with Act 62's requirement to permit solar choice customer-generators to use customer-generated energy behind the meter without penalty, S.C. Code Ann. § 58-40-20 (G)(2), the Joint Solar Choice Proposal appropriately values behind the meter consumption at prevailing retail rates and without the distorting effects of new fixed charges that artificially reduce the value of behind the meter consumption. From the utility system perspective, behind the meter consumption of customer-generated electricity is equivalent to energy efficiency or demand-side management measures as a decrement to system load. It would be unreasonable and discriminatory to value behind the meter consumption of customer-generated energy less than energy-efficiency savings or conservation efforts realized by non-customer generators. This proposal also complies with Act 62 because it does not impose large fixed charges on larger systems with the capacity to generate a significant amount of the customer-generator's energy needs. DESC Witness Everett's objection to customers building large systems is inconsistent with Act 62's definition of customer-generator as one who installs on-site renewable generation that "is intended primarily to offset *part or all* of the customer-generator's own electrical energy requirements." S.C. Code Ann. § 58-40-10 (C)(5) (emphasis added).

Even while permitting behind the meter consumption without penalty, the Joint Solar Choice Proposal complies with Act 62's requirement to "fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable." S.C. Code Ann. § 58-40-20 (A)(3). Witness Beach has demonstrated with his cost-benefit analysis that the benefits of solar equal or exceed the costs over the long-run, life cycle of distributed solar resources, and has therefore established that the Joint Solar Choice Proposal does not cause a cost-shift to nonparticipating customers. *See* Hearing Exhibit 11. In his analysis, Witness Beach demonstrates that the Joint Solar Choice Proposal passes all of the standard practice manual cost-effectiveness tests, including the Participant Cost Test, Utility Cost Test, and Total Resource Cost test. *Id.* Witness Beach also, in contrast to the estimations of cost-shift presented by DESC and ORS witnesses, supplied values for quantifiable benefits of rooftop solar and conducted a long-term, 25-year life-cycle analysis of its cost-effectiveness. *Id.* Witness Beach's analysis is consistent with Act 62's directive to consider the "aggregate impact of customer-generators on the electrical utility's long-run marginal costs of generation, distribution, and transmission." S.C. Code Ann. § 58-40-20 (D)(1).

Additionally, the specific components making up the Joint Solar Choice Proposal are reasonable and consistent with Act 62. Witness Beach's proposal to collect the BFC through a minimum bill ensures that customer-related costs are collected from customer-generators. The minimum bill amount proposed by Witness Beach reflects customer-related costs but may be updated based on the Commission's order in DESC's ongoing rate proceeding.

The Joint Solar Choice Proposal would make use of the standard residential TOU periods contained in the Company's existing Rate 5; these TOU periods better align with the Company's summer peak, which it uses to allocate all costs to its residential customers, and because those peak periods align with solar production, also better align solar customers' incentives with reducing utility costs, as required by Act 62. S.C. Code Ann. § 58-25-845 (B). The Joint Solar Choice Proposal would also align on- and off-peak crediting with like consumption, further incentivizing solar customers to take advantage of on- and off-peak rates, ultimately helping to reduce peak demand and utility costs. By providing that this Rate 5 TOU rate would not go into effect until customers have access to at least one-year of hourly load data following DESC's deployment of AMI, the Joint Solar Choice Proposal helps ensure that customers understand the economics of TOU rates and properly takes into consideration DESC's "current metering capability" and "the interaction of the tariff with time-variant rate schedules." S.C. Code Ann. § 58-40-20(F)(3)(a)–(b). In the interim, the Joint Solar Choice Proposal allows for solar choice customers to elect to stay on the standard residential tiered Rate 8 for a minimum of 10 years, with a minimum bill set as described above; this also protects existing solar customers in compliance with Section 58-40-20 (F)(3)(c).

Taken together, the Joint Solar Choice Proposal fulfills Act 62's intent to "continue enabling market-driven, private investment in distributed energy resources" and "avoid disruption to the growing marker for customer-scale distributed energy resources." S.C. Code Ann. § 58-40-20 (A)(1)-(2). The Joint Solar Choice Proposal's approximately 8% reduction in bill savings compared to the existing NEM program would not cause disruption to the solar market. As Witness Beach testified, the simple payback period for a typical 7 kW solar PV system is 9.9 years under the Joint Solar Choice proposal, a modest increase over the 9.4 years for the current NEM program. Moreover, given the recent trend of only moderate growth and projections for continued modest growth in the solar market under existing NEM programs, small and gradual reductions in bill savings along with resulting slightly longer payback periods are consistent with continued access to solar energy options for South Carolinians in DESC's service territory and the avoidance of disruption to the growing market for customer-scale DERs.

3. <u>The Joint Solar Choice Proposal is the only proposal supported by substantial evidence in this proceeding.</u>

The Commission's decisions must be supported by substantial evidence on the record. S.C. Code Ann. § 1-23-380(5)(e). Based on the record in this proceeding, the Joint Solar Choice Proposal is the only proposal supported by substantial evidence. Joint Witness Beach's testimony explains how the proposal complies with Act 62's directive to consider and quantify all of the benefits and costs of distributed energy resources. Beach Direct p. 7, l. 16 – p. 14, l. 2. Witness Beach's testimony also includes an analysis of the proposal under four different cost-effectiveness tests, demonstrating that the proposed Joint Solar Choice tariff will not cause a cost shift to non-participating residential ratepayers, will benefit all DESC ratepayers, and in the long-run will reduce DESC's cost of service. *Id.* p. 4, l. 16 – p. 6, l. 2; p. 14, l. 6 – p. 21, l. 12. Joint Solar Intervenors have rebutted all claims to the contrary. For example, Joint Solar Intervenors have demonstrated that the Joint Solar Choice Tariff would not cause a cost-shift. *Id.*; Hearing Exhibit 11; *see also* Barnes Surrebuttal pp. 16, l. 15 – p. 18, l. 12. Therefore, any decision premised on unsubstantiated concerns about the impacts of a cost shift would be illusory and not based on substantial evidence.[10]

In contrast, the record established that DESC's Solar Choice Proposal and ORS' Proposed Modifications would undermine the policies set forth by Act 62 by significantly reducing bill savings for the typical solar customer, benefiting wealthy and/or inefficient customers who consume large amounts of electricity, and essentially gutting the rooftop

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[10] *C.f.* In *Heater of Seabrook* the SC Supreme Court concluded that the Commission's decision to treat availability fees as operating revenues based on a concern about expenses not matching, when uncontroverted expert evidence provided that total unmatched expenses were negligible. Based on this, the Court determined that "the Commission's treatment of availability fees was, in fact, illusory." *Heater of Seabrook, Inc. v. Public Service Com'n of South Carolina*, 324 S.C. 56, 63, 478 S.E.2d 826, 829 (1996).

solar industry in South Carolina. Beach Direct at p. 22, l. 11 – p. 28, l. 16. DESC failed to rebut the demonstration by Joint Intervenors that the DESC Solar Choice Proposal would harm the state's solar industry, contrary to Act 62's directives. Therefore, the Joint Solar Choice Proposal is the only proposal for which substantial evidence on the record demonstrates compliance with Act 62. When, as here, all evidence points to one conclusion, the Commission must accept that conclusion. *See Polk v. E.I. duPont de Nemours Co.*, 158 S.E.2d 765, 768 (S.C. 1968) (observing "that if the evidence is all one way…then the issue becomes one of law" for the reviewing court); *Randolph v. Fiske-Carter Constr. Co.*, 125 S.E.2d 267, 270 (S.C. 1962) (noting that where there is absolutely no evidence to support the Commission's findings of fact, the issue becomes a question of law).

The Commission's authority is limited to approving or rejecting tariffs proffered during this proceeding. The Commission may not go beyond the record to propose some new, yet-to-be-analyzed tariff. An order approving a tariff not evaluated on the record lack substantial evidence and would be subject to reversal by a reviewing court. *See Hamm v. South Carolina Public Service Com'n*, 422 S.E.2d 110, 113-14 (S.C. 1992) (finding 13.25% rate of return to lack substantial evidence when no party's expert testified that over 13.00% was reasonable). Such an order would also be speculative; there is no evidence to indicate how an untested tariff would impact customers and the solar industry, or how it would comply with Act 62's other requirements. *See S.C. Energy Users Comm. v. Public Service Com'n of S.C.*, 505 S.E.2d 342, 343 (S.C. 1998) (holding that the Commission's order, "if predicated on unforeseeable future events, must be reversed as speculative").

If there is insufficient evidence on any one of these factors, the Commission may also allow the status quo NEM program to be an interim solar choice tariff, given the evidence in the record that the current NEM program would not disrupt the solar market, provides customers a reasonable opportunity to save money through rooftop solar, and cannot cause an immediate cost-shift under any circumstances because of Act 62's prohibition on continuing to collect the NEM DER incentive in relation to solar choice tariffs.

III. CONCLUSION

The Commission must reject DESC's Solar Choice Proposal and ORS's Proposed Modifications, as either would violate the letter and spirit of Act 62. DESC's Solar Choice Proposal includes several elements, each of which would make continued adoption of customer-scale solar difficult on its own, but that DESC combined to catastrophic effect. Specifically, DESC's proposal to simultaneously impose new, high fixed customer charges, new subscription fees on solar customers, substantially reduce the value of solar exports, shift to 15-minute interval netting, and charge artificially low volumetric rates would dramatically decrease potential bill savings for all but the largest residential customers who install atypically small solar systems. This result would severely disrupt the state's growing market for rooftop solar and thwart customer options for accessing rooftop solar. The DESC proposal would also discourage customer adoption of efficiency measures and encourage the wasteful use energy, even during times of system peak.

DESC claims that its Solar Choice Proposal is necessary to reduce a "cost shift" to non-solar customers, but has not proven that any such cost shift exists. Contrary to Act 62, DESC did not conduct a cost of service analysis to determine whether customer-generators provide an adequate rate of return, but rather, improperly used solar customer bill savings as a proxy for cost shift. Its resulting Solar Choice Proposal was designed specifically to protect DESC from losing revenue. This result is entirely inconsistent with multiple directives of Act 62, including the General Assembly's express legislative intent.

ORS's Proposed Modifications would even further reduce bill savings for customer-generators and more dramatically disrupt South Carolina's solar market. Moreover, ORS explicitly ignored multiple directives that the Commission must consider before establishing a solar choice tariff. As a result, its recommendation should carry little weight with the Commission.

In contrast, the Joint Solar Choice Proposal satisfies all of the provisions of Act 62. It represents a gradual change from the status quo of retail rate net metering, would result in a modest decline in bill savings for customer-generators, and would retain the viability of the residential solar market in DESC's territory. The Joint Solar Choice Proposal is based on a full consideration of the long-run benefits and costs of rooftop solar from the perspective of nonparticipating customers, customer-generators, and the utility as a whole. Because the Joint Solar Choice Proposal is the only proposal that satisfies Act 62 and is justified by the evidence in the record, we respectfully request that the Commission adopt it.

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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2020-229-E

Dominion Energy South Carolina, Incorporated's Establishment of a Solar Choice Metering Tariff Pursuant to S.C. Code Ann. Section 58-40-20 (See Docket No. 2019-182-E)	)	**CERTIFICATE OF SERVICE**

I certify that the following persons have been served with one (1) copy of the the South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Upstate Forever, Vote Solar, North Carolina Sustainable Energy Association, and Solar Energy Industries Association's Joint Post Hearing Brief via electronic mail at the addresses set forth below:

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This 14th day of April 2021.

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